

CHERRY STREET BRIDGE

Spanning the Tuscarawas River at Cherry Street  
Canal Fulton  
Stark County  
Ohio

HAER No. OH-80

HAER  
OH-80  
76-CANFU  
15

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN ENGINEERING RECORD  
National Park Service  
Northeast Region  
U.S. Custom House  
200 Chestnut Street  
Philadelphia, PA 19106

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# HISTORIC AMERICAN ENGINEERING RECORD

Cherry Street Bridge

HAER No. OH-80

**Location:** Cherry Street spanning the Tuscarawas River within the Village of Canal Fulton, Stark County, Ohio.

USGS Canal Fulton, Ohio Quadrangle  
Universal Transverse Mercator  
Zone 17, 449520.4526380

**Date of Construction:** 1913

**Present Owner:** Stark County, Ohio  
Stark County Commissioner's Office  
Stark County Courthouse  
Canton, Ohio 44706

**Present Use:** The bridge is open to local traffic.

**Significance:** This bridge contributes to the Canal Fulton Historic District, a district listed in the National Register of Historic Place. It is a good example of the Pratt pony truss design. The bridge location is important in local history for its association with the physical and economic development of the community. It is the work of the King Bridge Company, a company with a national reputation for bridge design and construction.

**Project Information:** This documentation was undertaken in May, 1995 in accordance with the Memorandum of Agreement by the Ohio Department of Transportation, Ohio Historic Preservation Office, Federal Highway Administration, and Advisory Council on Historic Preservation as a mitigation measure prior to the removal of the bridge.

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The Cherry Street Bridge serves to move vehicular and pedestrian traffic over the Tuscarawas River within the small community of Canal Fulton, Stark County, in northeastern Ohio. The location has historically served as a river crossing since the founding of the community. The bridge is located in close proximity to an arched stone bridge found several hundred yards away to the northwest. Both bridges work to facilitate movement within and through the community.

The community within which the bridge is located began its development in 1814 when seventy-nine lots were platted in a subdivision referred to as Milan. The lots were offered for sale at auction to buyers who were beginning to settle within this part of the county. The creation of the subdivision resulted in the first urban settlement in northwestern Stark County. The present bridge location was traversed by means of a wooden bridge.

In 1825, construction started on the Ohio Canal. It was to extend from Cleveland, on Lake Erie, down to the Ohio River town of Portsmouth. The 309 mile canal provided direct access from the eastern part of Ohio with these two important water courses. The first part of the canal linked Cleveland to Massillon, Ohio. At Milan, its location was northeast of the community and on the other side of the Tuscarawas River. The canal followed closely the river taking advantage of topography and other natural features. The planning and construction of the canal sparked land speculation, especially at favored locations for urban development. One result of the speculation was the construction of an eighty-seven lot subdivision, in 1826, directly opposite Milan. It was located adjacent to the canal. The new community was named Fulton, but was changed to Canal Fulton in 1830.

As the result of the close juxtaposition of the river and the canal, the area soon had four bridges; the two that crossed the Tuscarawas River and two that crossed over the canal. Cherry Street and Liberty Street emerged as the main streets that linked Milan and Fulton.

In 1828, the canal was open from Cleveland to Massillon. Canal traffic soon increased the flow of commerce between these two communities. Fulton profited from the traffic and together with Milan emerged as a small market center. Within ten years, the growth of Canal Fulton surpassed that of Milan, based primarily on its canal location. By 1836, five large warehouses had been constructed to house the storage of a variety of grains. Agricultural surplus from the growing surrounding rural landscape was hauled to Canal Fulton for direct shipment on the

canal or for storage and later shipment. In addition, the canal emerged as an important transporter of passengers. Packet boats moved people along the canal route. This was an important aspect of traffic for communities such as Canal Fulton. A commercial district emerged that housed not only goods and services needed for the community and surrounding rural area, but also provided taverns and hotels that catered to canal passengers as well.

In 1869, the first railroad was constructed through Milan. The Massillon and Cleveland Railroad led to the demise of canal traffic at Canal Fulton. Since the railroad was located on the southwestern side of the river, the Cherry Street Bridge continued to serve the community. As the canal traffic declined, goods were carried over the bridge to the railroad. This was not followed with any shifts in commercial land use. Canal Fulton retained the majority of business activity but with the change in transportation focus, many businesses declined. This resulted in an abandonment of buildings or conversion to other uses by the early 1900's. By 1911, the majority of the canals route at Canal Fulton ceased to exist and parts were filled in. Today, a small portion of the original canal is used to educational and tourist purposes. The bridges which crossed it were removed leaving the present bridge and stone bridge location as the only remaining bridges within the community.

Cherry Street and its bridge location continued to be of major importance to the community. Over the years, several wooden bridges had been constructed at the present bridge location. Each of them required regular maintenance and were subject to periodic destruction or damage from floods on the Tuscarawas River. In the early 1870's, a bowstring arch metal truss bridge was constructed to replace a wooden bridge. That bridge provided an ease of maintenance and a more permanent and reliable structure.

On March 25, 1913, the Tuscarawas River began to flood as the result of torrential rains that had spread across Ohio and other states. Rising water soon eroded banks and bridge abutments. On the next day, the Cherry Street and Liberty Street bridges were washed away. Stark County had been devastated by river flooding. In addition to the two bridges at Canal Fulton, the county lost nine other bridges. Because of the statewide loss of bridges, the Ohio Legislature passed a law that allowed counties to issue and sell bonds to cover the cost of new bridge construction.

The county surveyor was directed to prepare plans and specifications for the construction of a new Cherry Street Bridge.

He contracted with Wilbur J. Watson and Company, Bridge Engineers of Cleveland, Ohio to prepare the necessary drawings and specifications. The plans were submitted on July 12 and approved by the County Commissioner's on July 14, 1913.

On August 20, 1913, the County Commissioner's reviewed submitted bids to construct a new superstructure and substructure for a bridge to be located at the same location on Cherry Street. The following bids were reviewed:

Canal Fulton Bridge Superstructure:

King Bridge Company	\$8,778.00
Central Concrete and Construction Co.	8,910.00
Massillon Bridge Company	9,020.00
Penn Bridge Company	9,108.00
E. J. Landor	9,350.00
Estimate of County Engineer	9,900.00

Canal Fulton Bridge Substructure:

W. E. Scoville bid using concrete	\$8,408.50
W. E. Scoville bid using stone	7,958.50
McWhick Construction Company using concrete	7,472.90
E. J. Landor bid not completed	
Estimate of County Engineer	9,665.00

After consideration, the Commissioner's awarded the bridge superstructure contract to the King Bridge Company in the sum of \$8,778.00. The substructure bid was awarded to W. E. Scoville in the amount of \$7,958.50 for the stone pier and abutments construction. Total cost for replacement of the previous Cherry Street lattice bowstring arch metal bridge in Canal Fulton was approved in the amount of \$16,736.50.

The King Bridge Company brought their national reputation to this project. Their corporate headquarters was located in Cleveland, Ohio, just a short distance from Canal Fulton. The company was established in 1860 by Zenas King. Mr. King has previously worked for Mosley Bridge Company in Cincinnati, Ohio. Initially, Mr. King's company manufactured bridges and boiler works. In 1861, a patent was secured for the construction of a tubular bowstring arch bridge. This proprietary technology brought business to the company. In 1864, a patent for hollow girder construction of a metal swing bridge also extended the company's business. By the late 1860's, the company was not only a statewide fabricator of bridges, but extended its operation into several adjacent states.

In 1871, the company was known as the King Iron Bridge and Manufacturing Company. At that time, public shares of its stock were offered. One important aspects of its growth was related to advertising. The company was aggressively involved with the promotion of its technology and ability to construct bridges. It published catalogs which incorporated endorsements from satisfied customers. Additionally, its growth and expansion led to the establishment of an office in the Great Plains. This part of the country was experiencing the need for bridge fabricators to accommodate the needs of the growing railroads and road system. The company responded by establishing an office in Iola, Kansas.

The company continued to grow and by the late 1870's had established offices in Boston, Philadelphia, Des Moines, Kansas City, Bloomington, Indiana, and San Antonio. During that time, the company began to diversify its engineering and construction to incorporate the then evolving technology associated with the metal through truss bridge. For example, the company began to construct the Pratt through truss as it gained in popularity. It also constructed other styles as well. By 1884, the company was involved with a national operation and retained its headquarters at Cleveland. Its ability to successfully compete for bridge contracts was predicated on the establishment of regional sales forces. Offices were staffed with salaried sales personnel. The use of the catalog and annual reports became an important sales tool. Additionally, the company began to employ designers who had received a formal education in engineering. Another important aspect of the company's bridge work involved the division of labor that was internal to the firm. This was not a unique situation, but a standard practice for larger companies within the bridge building industry. Specifically, the business of building a bridge was integrated through several different divisions: sales, design, fabrication, and erection. The size and diversity of the company was highlighted in its 1884 catalog. The company proclaimed that it had constructed almost 5,000 bridges and that it was constructing almost 250 new ones annually. At the time of Mr. King's death in 1892, the company was regarded as one of the major bridge companies in the United States.

By the time the company received the contract for the superstructure for the new Cherry Street Bridge in Canal Fulton, it had experienced several setbacks. In 1906, it had dissolved its Ohio business corporation as a result of legal problems associated with the restraint of trade. The company had been accused, along with twelve other companies, of restricting competition. In 1923, the company emerged as the Ohio King Bridge Company but soon changed its name to the Cleveland Bridge Company. It remained in operation until the late 1940's.

The Cherry Street Bridge consists of two riveted iron spans that incorporate the Pratt pony truss design. The overall length is 204 feet and its width, curb to curb is 20 feet. Located along the southeast side is a pedestrian walkway 5 feet in width and extends the length of both spans. The height, extending from top chord to floor deck is 8 feet 9 inches.

Each span is 104 feet in length incorporating 8 panels 13 feet in length. The spans exhibit a configuration composed of two incline ends and six interior panels. Incline end posts and top chords are composed of two 12 inch high channel beams capped with an 18 inch riveted cover plate with lattice work on the underside. Bottom chords are composed of 8 inch channel beams. The details of the web are accentuated by vertical and diagonal lattice connected to the top and bottom chords with rivets and 3/8 inch steel gussets where the members meet. The pedestrian walkway is supported with riveted steel plates that cantilever from the bottom chord and vertical connections. A metal lattice separates the walkway from the deck and terminates with a newel post at either end. The deck is composed of seven stringer I beams that extend the length of each span. These are supported by 14 floor beams extending the width of the span at their connection with the bottom chord. Additionally, bottom lateral bracing extend at each connection. The roadbed exhibits a tight, open steel lattice.

The superstructure is anchored to the substructure at each end abutment and at the middle pier by means of a roller bearing plate. Each abutment is composed of smooth sandstone with wing walls projecting off at a 45 degree angle. The center pier is rectangular in plan with its upstream side exhibiting a pointed face.

Over the years, the spans of the bridge have experienced various levels of maintenance and rehabilitation. Maintenance has been limited to periodic painting of the superstructure. Rehabilitation has been major. The original concrete roadway has been replaced as have the original stringers and beams. Today, the spans are experiencing deterioration, especially to the bearing plates and connections at the bottom chords. Corrosion and metal stress are examples of structural deficiencies.

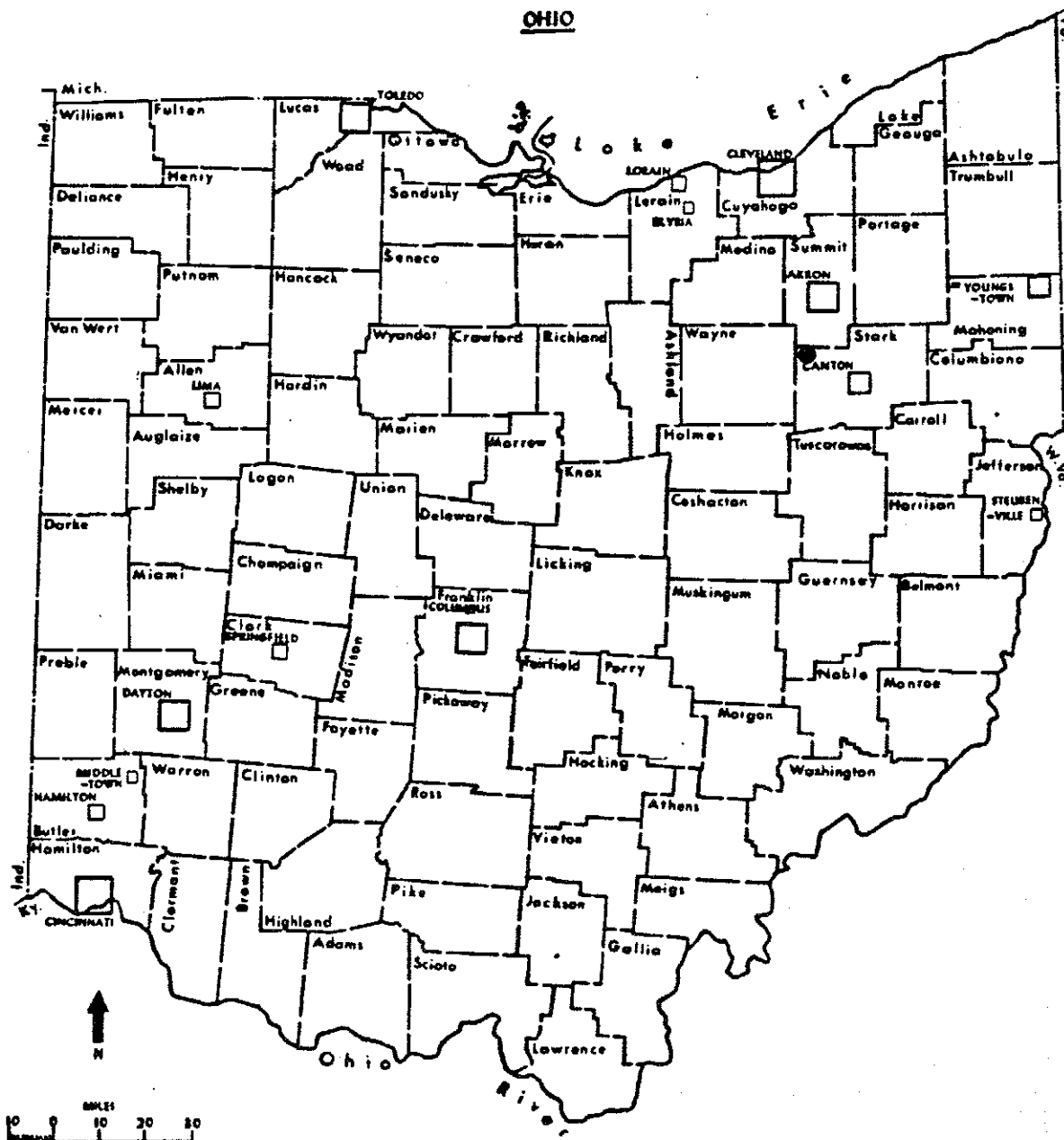
In 1992, an average daily traffic of 5,440 vehicles crossed over the bridge. This volume coupled with the significant deterioration has resulted in the need to replace the bridge. A new structure will provide a safe transit over the Tuscarawas River and result in a bridge location continuing to contribute to the vehicular and pedestrian movement within the community.

SOURCES OF INFORMATION

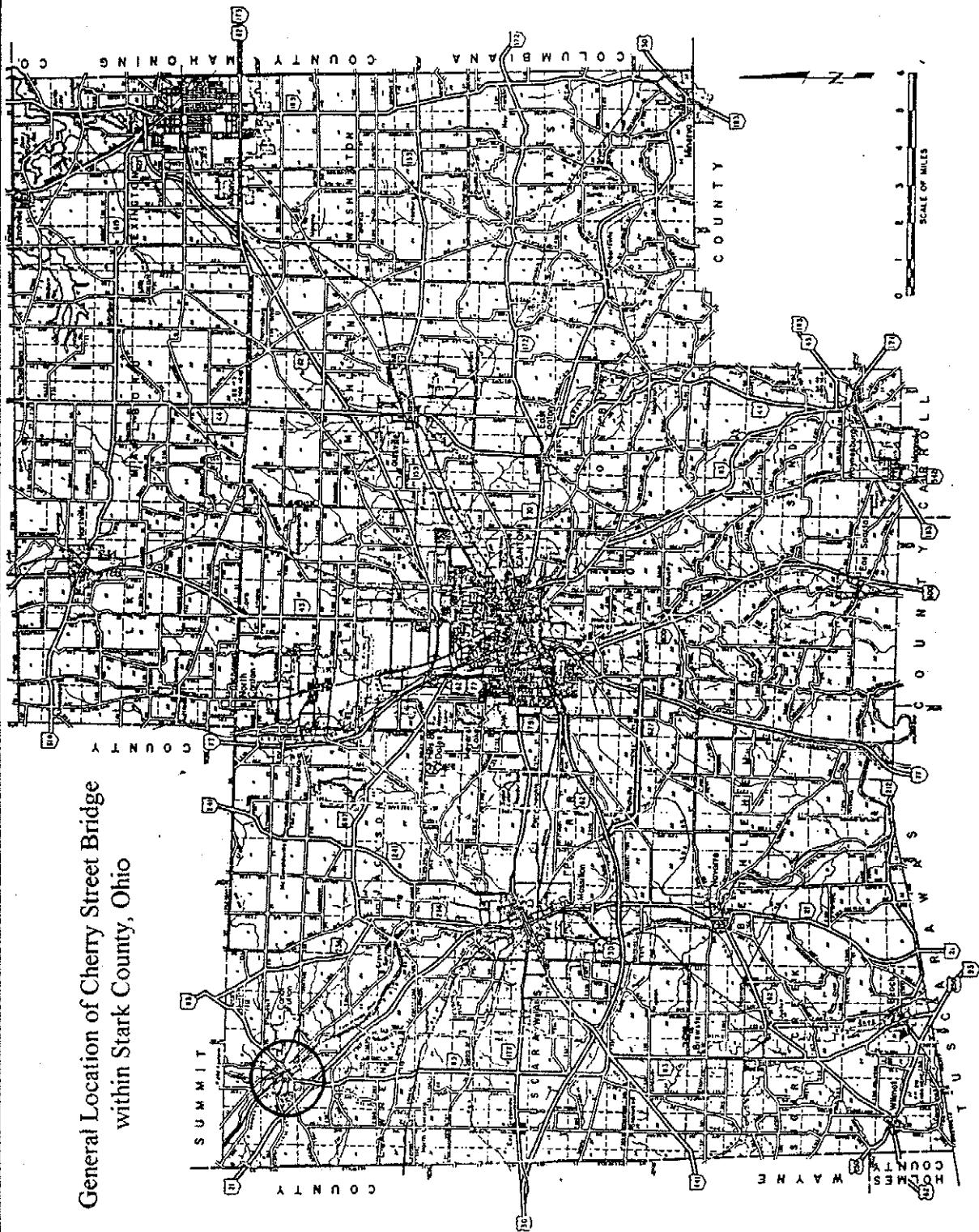
- Blue, H. T. O., *History of Stark County, Ohio*, S.J. Clarke Publishing Company, Chicago, 1928.
- Canton Daily News, Canton, Ohio.  
March 26, 1913  
April 11, 1913  
April 12, 1913
- Danner, John, *Old Landmarks of Canton and Stark County, Ohio*, B. F. Logan Publishing Company, Logansport, Indiana, 1904.
- Everts, L. H., *Combination Atlas Map of Stark County, Ohio*, L. H. Everts and Company, Philadelphia, Pa., 1875.
- Heald, E. T., *The Stark County Story*, Stark County Historical Society, Canton, 1950.
- Ohio Department of Transportation, Structure File for Cherry Street Bridge No. 7605137, District #4, Ravenna, Ohio.
- Ohio Department of Transportation, *The Second Ohio Historic Bridge Inventory, Evaluation and Preservation Plan*, Columbus, Ohio, 1990.
- Ohio Map and Atlas Company, *Atlas of Stark County, Ohio*, Canton, Ohio, 1896.
- Simmons, David, "Bridge Building on a National Scale: The King Iron Bridge and Manufacturing Company", *The Journal of Industrial Archaeology*, Vol. 15, No. 2, 1989, p. 23-39.
- Stark County Commissioner's Journal, Stark County Commissioner's Office, Canton, Ohio.  
Volume No. 13, 1913  
Page 413 (Discussion of destroyed county bridges)  
Page 422 (Receipt of plans for new Cherry Street Bridge)  
Page 472 and 473 (Awarding of bridge contract)
- Stark County Engineer's Office, Stark County, Ohio.  
Copy of original drawings for new Cherry Street Bridge in Canal Fulton, Ohio, 1913.
- U. S. Geological Service, *Topographic Map: Canal Fulton, Ohio Quadrangle*, 1987.

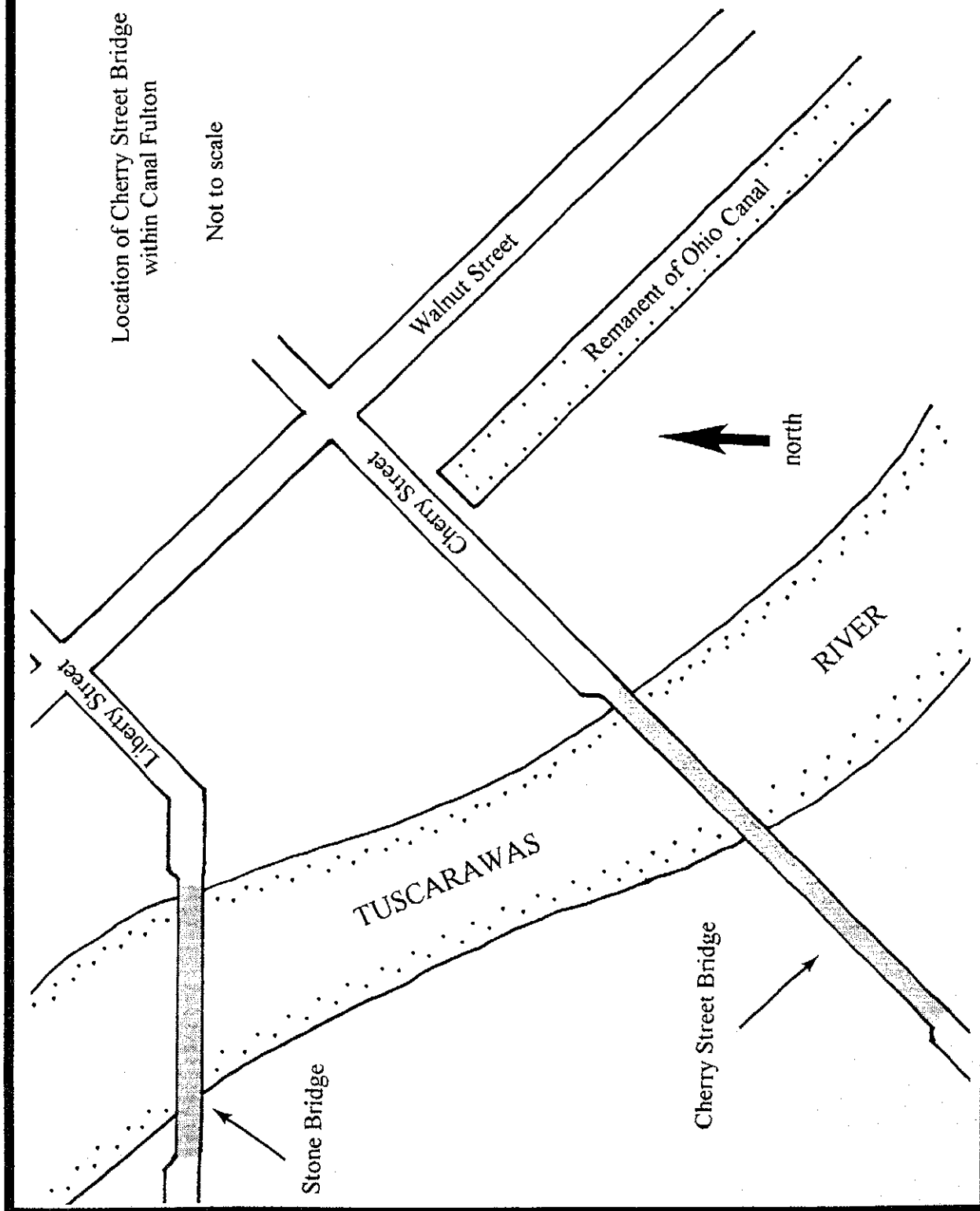


### General Location of Canal Fulton within the State of Ohio

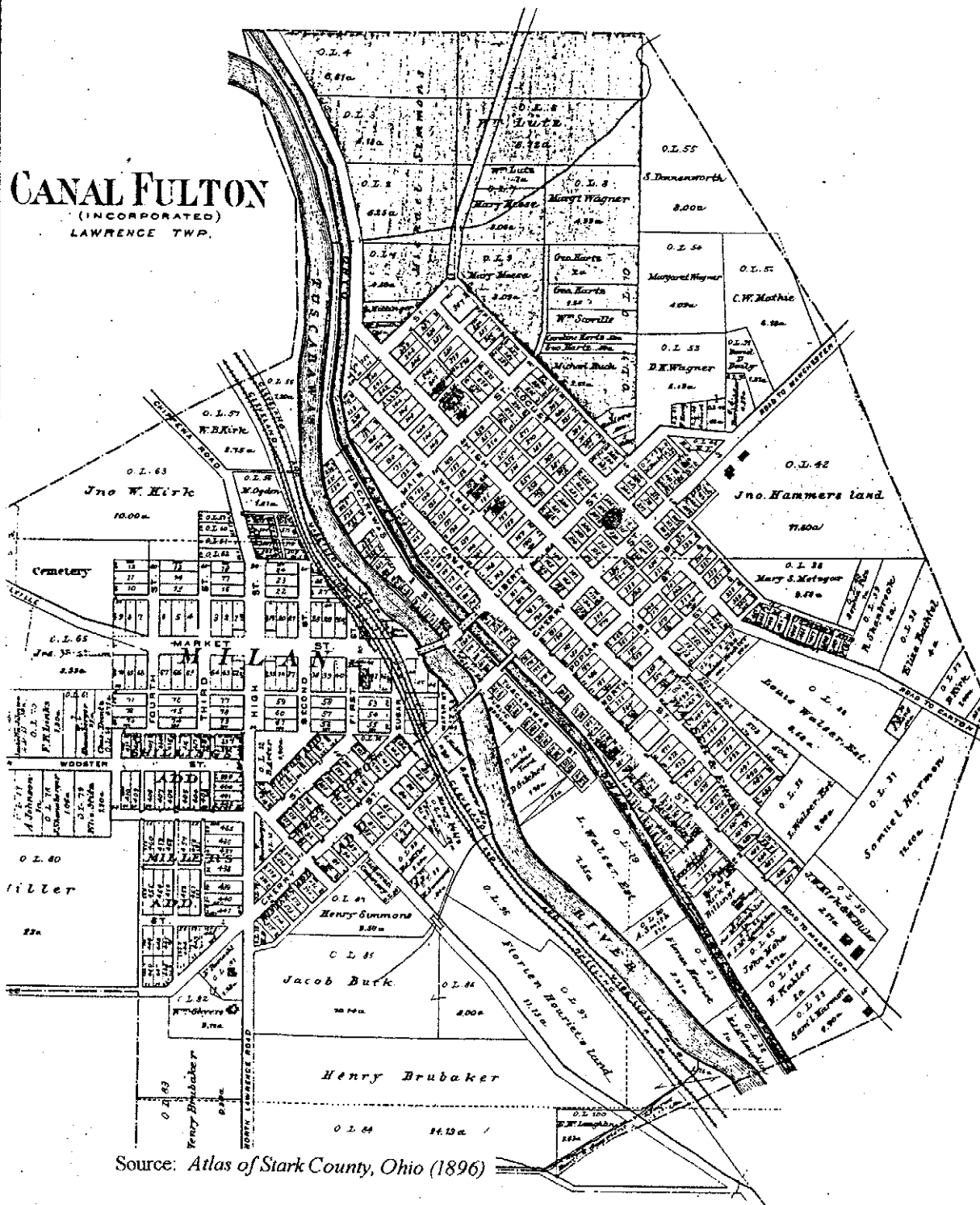


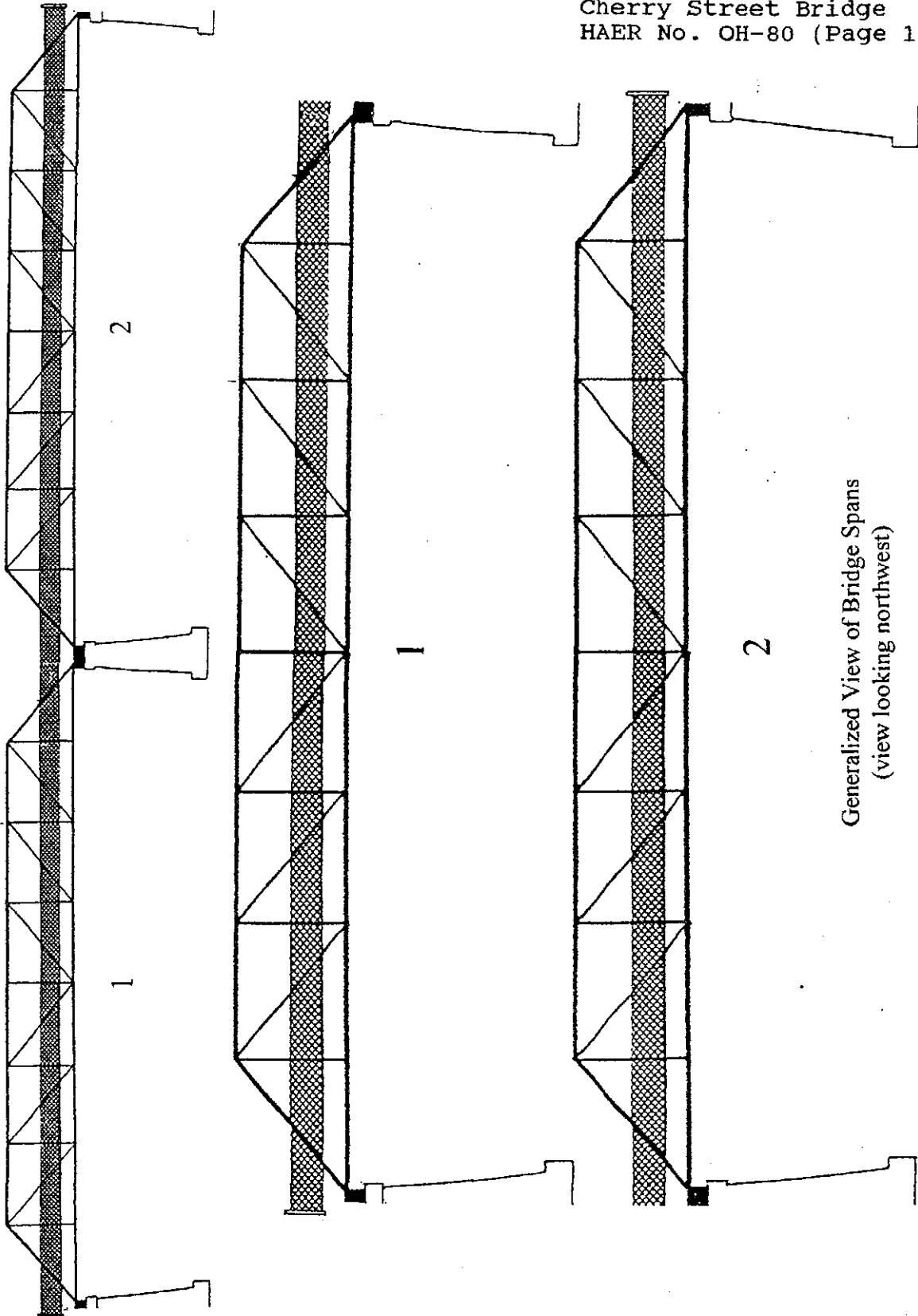
General Location of Cherry Street Bridge  
within Stark County, Ohio



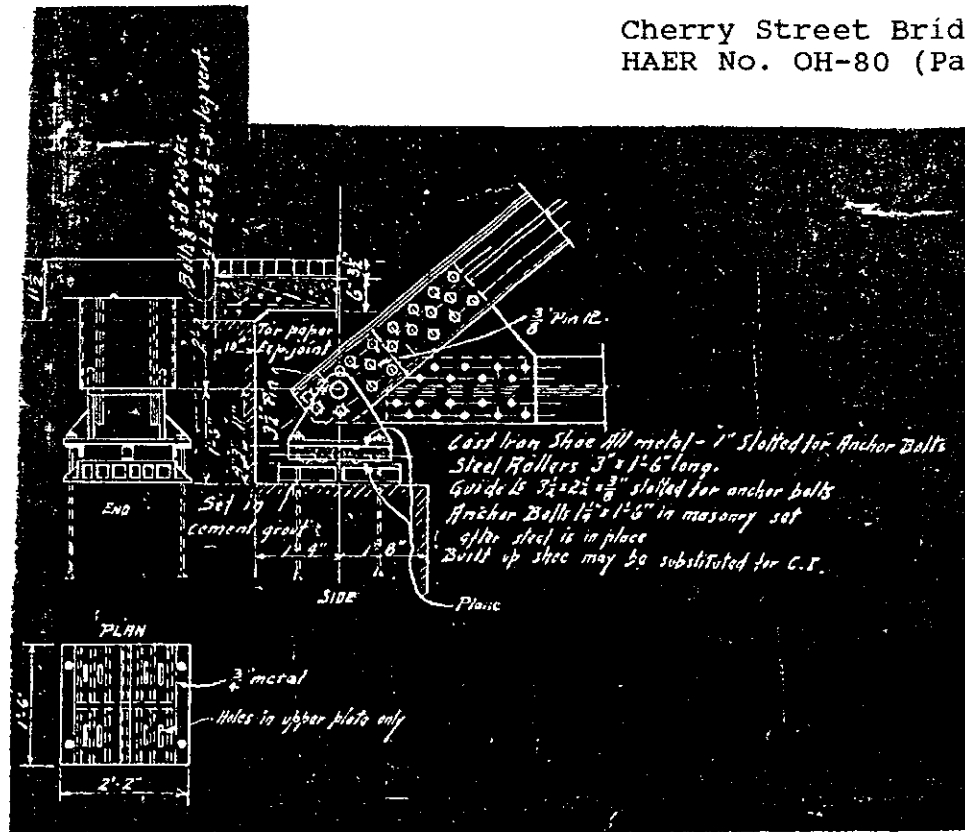


### Development Pattern of Canal Fulton in 1896

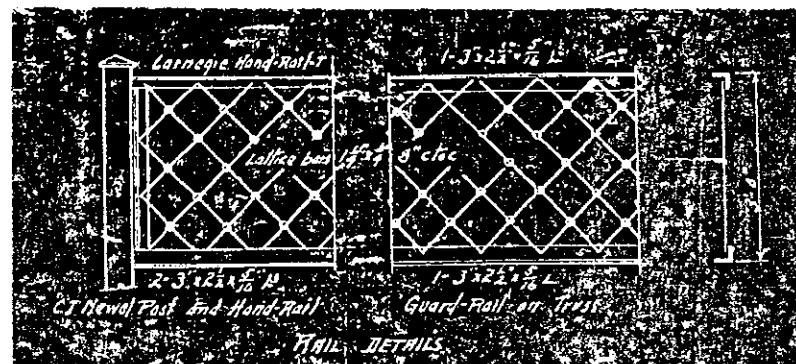


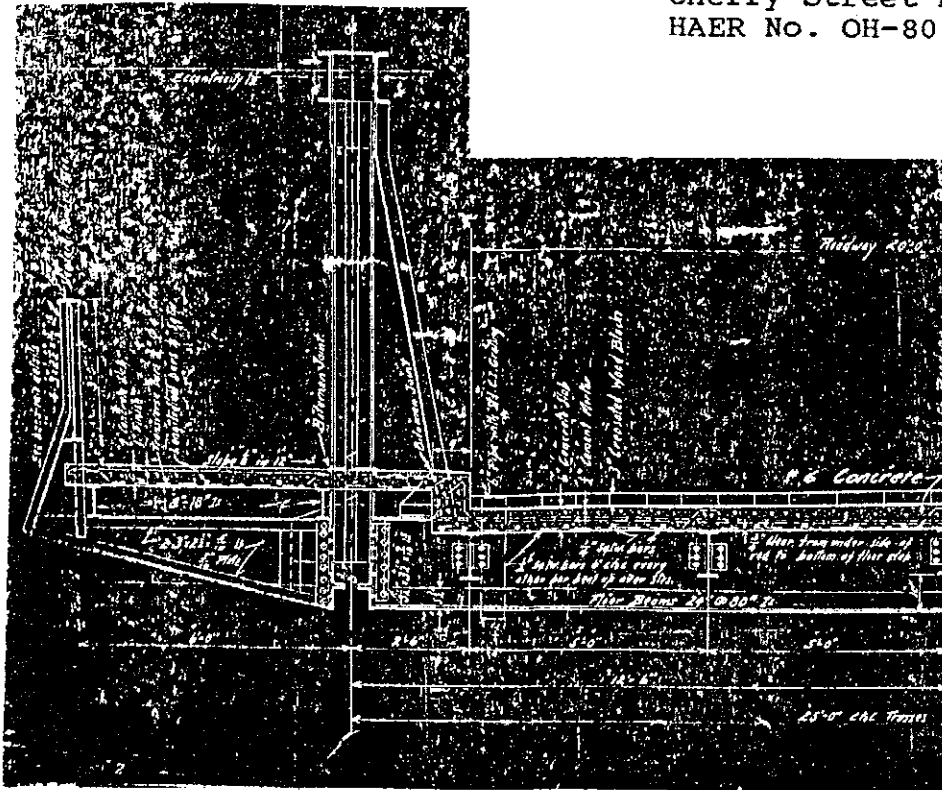


Generalized View of Bridge Spans  
(view looking northwest)



Various Details





## Various Details

